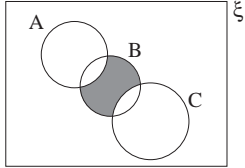
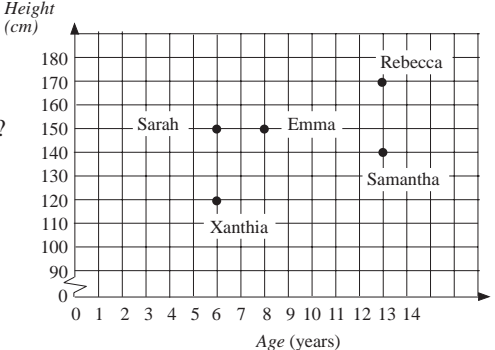
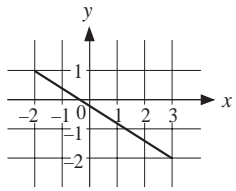
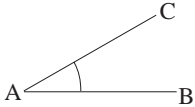
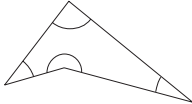
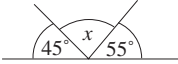
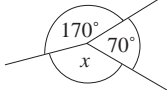
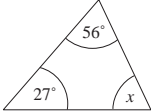
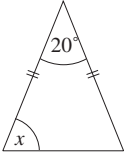
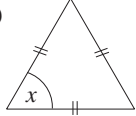
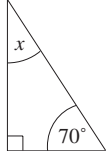



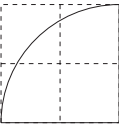
Unit	Notes	Examples
<p>1.4 Set Notation</p>	<p>Universal set (ξ)</p> <p>Intersection (\cap), Union (\cup)</p> <p>Compliment of (A')</p> <p>Subset ($A \subset B$)</p> <p>Empty set (\emptyset)</p>	<p>If $\xi = \{ 1, 2, 3, 4, 5, 6 \}$, $A = \{ 1, 2, 3, 4 \}$ and $B = \{ 4, 5 \}$ find; (a) $A \cap B$ (b) $A \cup B$ (c) A' (d) B' Is $B \subset C$?</p> <p>Use set notation to describe the shaded area.</p> 
<p>1.5 Logic Problems and Venn Diagrams</p>	<p>Solving problems with 2 or 3 subsets using Venn diagrams</p>	<p>In a class there are</p> <ul style="list-style-type: none"> • 8 students who play football or hockey • 7 students who do not play football or hockey • 13 students who play hockey • 19 students who play football <p>How many students are in the class?</p>
<p>2. <u>ARITHMETIC : PLACE VALUE</u></p>		
<p>2.1 Place Value and Rounding</p>	<p>Place value for integers</p> <p>Numbers in words and vice versa</p> <p>Rounding to the nearest 10, 100, 1000</p> <p>Rounding in context</p>	<p>What is the value of 9 in (a) 29 (b) 98?</p> <p>Write (a) 2 452 in words (b) One thousand and twenty seven in figures.</p> <p>Write 269 to the nearest (a) 10 (b) 100</p> <p>Attendance at a pop concert was 47 627. Write this to the nearest 1000.</p> <p>Attendance at a football match was 12 000 to the nearest thousand. What is the largest and smallest possible number of people attending?</p>
<p>2.2 Decimals and Place Value</p>	<p>Place value for decimals</p> <p>Ordering numbers, including decimals</p> <p>Rounding to prescribed number of places</p>	<p>What is the value of 9 in (a) 0.95 (b) 0.109?</p> <p>Write in order of increasing size; 0.08 , 0.29 , 0.71 , 0.60</p> <p>Write 2.794 correct to (a) 2 d.p. (b) 1 d.p.</p>

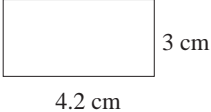
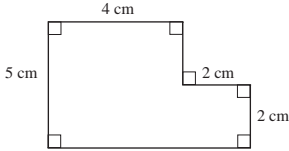
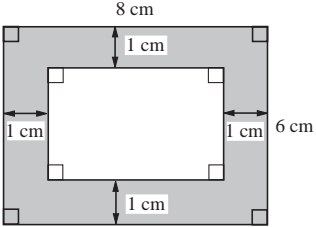
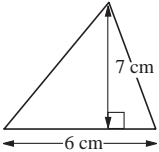
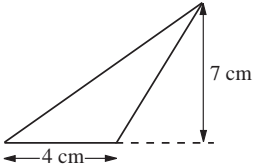
Unit	Notes	Examples
<p>3. <u>GRAPHS</u></p> <p>3.1 Scatter Graphs</p> <p>3.2 Plotting Points</p> <p>3.3 Negative Numbers</p> <p>3.4 Coordinates</p> <p>3.5 Plotting Polygons</p> <p>3.6 Conversion Graphs</p>	<p>Interpreting scatter graphs</p> <p>Plotting simple scatter graphs</p> <p>Reading off information</p> <p>(No correlation or line of best fit)</p> <p>Coordinates in first quadrant</p> <p>Number line with negative and positive numbers</p> <p>Ordering numbers</p> <p>Use of $>$, $<$ symbols</p> <p>All four quadrants</p> <p>Names of polygons (up to and including decagon)</p> <p>Regular polygons</p> <p>Plotting corners of a polygon</p> <p>Plotting and interpreting graphs from real life data</p>	<p>Five girls' height and age have been plotted on the graph.</p> <p>(a) Who is the tallest and how tall is she?</p> <p>(b) Who is the youngest and how young is she?</p> <p>(c) How much taller is Rebecca than Emma?</p>  <p>Join the points with coordinates (0, 3), (5, 6) and (5, 0) to draw a triangle.</p> <p>What is the temperature (a) 3°C warmer than, and (b) 4°C cooler than -2°C.</p> <p>Write these numbers in order starting with the smallest; 6, -7, 8, -2, -5, -10, 3.</p> <p>Put a $>$ or $<$ sign in the box to make each statement true.</p> <p>(a) -6 <input type="text"/> -7 (b) -2 <input type="text"/> 4</p> <p>On a set of coordinate axes, join the point (-3, 2) to (2, 2) to (1, -1) to (-4, -1) to (-3, 2). What shape have you drawn?</p>  <p>The line is one side of a square. What are the possible coordinates of the corners of the square?</p> <p>Half of a heptagon with one line of symmetry can be drawn joining the points (2, 4), (-2, 1), (-2, -1), (0, -3), (2, -3). Draw the heptagon. Write down the missing corners.</p> <p>Convert 50 mph to kmph and 100 kmph to mph using a conversion graph.</p> <p>Currency exchange using conversion graph.</p>


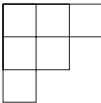
Unit	Notes	Examples
<p>4. <u>ARITHMETIC: ADDITION AND SUBTRACTION OF DECIMALS</u></p> <p>4.1 Addition and Subtraction</p> <p>4.2 Dealing with Money</p>	<p>Whole numbers: mental calculations</p> <p>Vocabulary (sum, difference)</p> <p>Brackets</p> <p>Problems in context</p> <p>Decimals</p> <p>Shopping bills, change</p>	<p>(a) $23 + 8$, $28 - 15$ (b) $112 - 49$</p> <p>Find the sum of 6, 10 and 24. Find the difference between 57 and 84.</p> <p>(a) $3 + (6 - 2) = ?$ (b) $(17 - 1) - 4 = ?$</p> <p>There are 22 people on a bus. 5 people get off and 12 get on. How many are now on the bus? At the next stop nobody gets off and the bus leaves with 35 people on it. How many people got on at the stop?</p> <p>(a) $23.4 + 2.34$ (b) $23.4 - 2.34$</p> <p>How much change would you get from £5 if you bought a magazine for £2.35?</p> <p>A sunflower is 1.32 m tall. It grows 19 cm next week.</p> <p>(a) How tall is the plant now? (b) How much more must it grow to be 2 m tall?</p>
<p>5 <u>ANGLES</u></p> <p>5.1 Angles and Turns</p> <p>5.2 Measuring Angles</p>	<p>Whole turn, half turn, quarter turn</p> <p>360°, 180°, 90° turns</p> <p>Compass points: N, NE, E, SE, S, SW, W, NW</p> <p>Using a protractor</p>	<p>Through what angle do you turn from (a) NE to NW anti-clockwise (b) E to N clockwise ?</p> <p>In what direction will you be facing if you turn (a) 180° clockwise from NE (b) 90° anticlockwise from SW ?</p> <p>Draw an angle of size 285°.</p> <p>Measure angle CAB.</p> 

Unit	Notes	Examples
<p>5.3 Classifying Angles</p> <p>5.4 Angles on a Line and Angles on a Point</p> <p>5.5 Constructing Triangles</p> <p>5.6 Finding Angles in Triangles</p>	<p>Acute, obtuse, reflex</p> <p>Right angle</p> <p>Angle round complete circle is 360°</p> <p>Angle round point on a straight line is 180°</p> <p>Right angle is 90°</p> <p>Given side and two angles</p> <p>Given all three sides</p> <p>Sum of interior angles = 180°</p> <p>Classifying triangles: isosceles, equilateral, scalene, right angled</p>	<p>For this shape classify each angle. </p> <p>Find x° when (a)  (b) </p> <p>Draw triangle with box 5 cm between angles 45° and 65°.</p> <p>Draw triangle with sides 5, 4 and 6 cm.</p> <p>Find x in the triangle. </p> <p>Find x in (a)  (b)  (c) </p>
<p>6. <u>ARITHMETIC: MULTIPLICATION OF DECIMALS</u></p> <p>6.1 Multiplication of Whole Numbers</p>	<p>Understanding relationships between addition and multiplication</p> <p>Vocabulary: product</p> <p>Mental work</p>	<p>$5 \times 3 = 5 + 5 + 5$ and $5 \times 3 = 3 \times 5$</p> <p>Find the product of 6 and 9</p> <p>Quick recall of multiplication tables up to at least 10×10</p>

Unit	Notes	Examples
6.2 Long Multiplication	Pencil and paper method Other methods e.g. Napier's method, Russian multiplication, Box method	$19 \times 48 = ?$
6.3 Multiplying with Decimals	Understand that multiplication by a power of 10 moves the digits to the left	Given that $35 \times 19 = 665$, what is the value of; (a) 3.5×19 (b) 3.5×1.9 (c) 350×1.9 (d) 350×190
6.4 Problems Involving Multiplication	Problems in context	A train has 8 carriages. There are 52 seats in each. How many seats are there on the train? Rope is sold for £1.28 per metre. Find the cost of 10 metres of rope. Apples are sold for £1.06 per kilogram. Find the cost of 2.4 kilograms of apples.
7. <u>NUMBER PATTERNS AND SEQUENCES</u>		
7.1 Multiples	Multiples of whole numbers Use of multiplication squares to show multiples or identify them	Write down the first 6 multiples of 11 Show the first 11 multiples of 9 on a multiplication square
7.2 Finding the Next Term	Identify the pattern e.g. constant differences	What are the next 3 numbers in the sequences? (a) 12, 17, 22, ... (b) 50, 47, 44, 41, 38, ... Copy the sequences and write the next 6 terms. (a) 1, 4, 9, 16, 25, ... (b) 0, 3, 7, 12, 18, ...
7.3 Generating Number Sequences	Using a formula or number machine to generate a sequence Finding the formula for a given sequence	What sequence is generated by the formula $6n + 1$? What number comes out of this machine? $7 \longrightarrow \boxed{+2} \longrightarrow ?$ What is the formula for the sequence 11, 21, 31, 41, 51, ...

Unit	Notes	Examples
7.4 Formula for General Terms	Linear sequences only	For the sequence 3, 7, 11, 15, ... find; (a) the next <i>three</i> terms (b) the 100th term (c) the 1000th term Write down the formula for the <i>n</i> th term for (a) 1, 4, 7, 10, 13, ... (b) $\frac{1}{4}$, $\frac{2}{5}$, $\frac{3}{6}$, $\frac{4}{7}$, $\frac{5}{8}$
8. <u>ARITHMETIC: DIVISION OF DECIMALS</u> 8.1 Mental Division of Whole Numbers 8.2 Division Methods for Whole Numbers 8.3 Division Problems	Mental calculation (up to $100 \div 10$) Order of operations (BODMAS) Division by powers of 10 moves digits to the right Long division Problems in context including remainder	$24 \div 6 = ?$ $45 \div 5 = ?$ Calculate (a) $16 \times 2 + 3$ (b) $16 \times (2 + 3)$ $1\ 200 \div 100 = ?$ $24.3 \div 10 = ?$ $6.31 \div 4 = ?$ $17.28 \div 1.2 = ?$ 45 sweets are divided equally between 9 children. How many do they each get? How many chocolate bars, costing 23p each, can you buy for £1?
9. <u>AREAS AND PERIMETERS</u> 9.1 Area 9.2 Area and Perimeter	Counting squares Estimation by squares Units needed, including conversion between metric units	Find the area of  Estimate the area of  A square has sides of 5 cm. Find its (a) area in cm^2 and mm^2 (b) perimeter in cm. What is the area of a square whose perimeter is 12 cm?

Unit	Notes	Examples
<p>9.3 The Area and Perimeter of a Rectangle</p>	<p>Units needed including conversion between metric units</p> <p>N.B. $1 \text{ m}^2 \neq 100 \text{ cm}^2$</p> <p>Reverse problems</p>	<p>Find the area of rectangle </p> <p>Calculate the width of a rectangle which has an area of $7\,500 \text{ cm}^2$ and length of 1 m.</p>
<p>9.4 Area of Compound Shapes</p>	<p>Using adding or subtracting areas of rectangles</p>	<p>Find the area of this shape. </p> <p>Find the shaded area. </p>
<p>9.5 Area of a Triangle</p>	<p>Area = $\frac{1}{2} \times \text{base} \times \text{perpendicular height}$ including obtuse angled triangles</p>	<p>Find the area of the triangle. </p> <p>Find the area of the triangle. </p>

Unit	Notes	Examples
10 <u>ARITHMETIC: FRACTIONS</u> 10.1 Fractions 10.2 Equivalent Fractions 10.3 Fractions of Quantities 10.4 Mixed Numbers and Vulgar Fractions	<p>Numbers of the form $\frac{a}{b}$ ($b \neq 0$), with a and b as whole numbers</p> <p>Identifying fractions</p> <p>Representing fractions</p> <p>Diagrammatic representation of equivalent fractions</p> <p>Mental practice</p> <p>Ordering fractions</p> <p>Numerically and in context</p> <p>Conversion from improper fractions to mixed numbers</p> <p>Conversion of mixed numbers to improper fractions</p>	<p>What fraction of the shape is shaded? </p> <p>Shade $\frac{1}{3}$ of this shape. </p> <p>$\frac{1}{2} = \frac{?}{4} = \frac{?}{8} = \frac{?}{16}$</p> <p>$\frac{3}{9} = ?$</p> <p>Write these fractions in increasing order ; $\frac{1}{7}, \frac{1}{9}, \frac{1}{3}, \frac{1}{10}, \frac{1}{4}$</p> <p>$\frac{1}{2}$ of 10 = ? $\frac{3}{4}$ of 16 = ? $\frac{1}{5}$ of £30 = ? $\frac{4}{5}$ of 25 kg = ?</p> <p>$\frac{12}{5} = ?$</p> <p>$5\frac{2}{3} = ?$</p>

Unit	Notes	Examples																		
<p>11 <u>DATA COLLECTION AND PRESENTATION</u></p> <p>11.1 Types of Data</p> <p>11.2 Collecting Data</p>	<p>Qualitative data</p> <p>Quantitative data - discrete and continuous</p> <p>Using suitable data collection sheet, including tally charts</p> <p>Illustrating data with</p> <ul style="list-style-type: none"> • pictograms • bar charts • pie charts <p>Introduction of concept of hypothesis</p>	<p>Colour, Birthplace, Personality</p> <p>Discrete: Shoe size, dress size, ranking Continuous: Height, weight, time</p> <p>Illustrate the information in the tally chart using</p> <p>(a) a pictogram (b) a bar chart (c) a pie chart</p> <p>What conclusions can you reach from the data?</p> <table border="1" data-bbox="1603 528 1973 778"> <thead> <tr> <th>Method of Travel</th> <th>Tally</th> <th>Frequency</th> </tr> </thead> <tbody> <tr> <td>Walk</td> <td> </td> <td>9</td> </tr> <tr> <td>Bike</td> <td> </td> <td>3</td> </tr> <tr> <td>Car</td> <td> </td> <td>6</td> </tr> <tr> <td>Bus</td> <td> </td> <td>12</td> </tr> <tr> <td>Total</td> <td></td> <td>30</td> </tr> </tbody> </table> <p>"More children in my class travel to school by bus than by any other method."</p> <p>(a) Collect data to test this hypothesis. (b) Present your data in a suitable diagram (c) Was the original hypothesis correct?</p>	Method of Travel	Tally	Frequency	Walk		9	Bike		3	Car		6	Bus		12	Total		30
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<p>12 <u>ARITHMETIC: REVISION</u></p> <p>12.1 Arithmetic with Whole Numbers and Decimals</p> <p>12.2 Problems with Arithmetic</p>	<p>Mental work and written work</p> <p>Practical context</p>	<p>Calculate: (a) $3.4 \div 4.75$ (b) 49×10 (c) 47.3×10 (d) $52 \div 10$ (e) $7.41 \div 100$ (f) 3.6×4 (g) $909 \div 3$ (h) $10.4 \div 1.3$</p> <p>Sarah buys 8 ice creams costing 95p each. How much does she spend?</p> <p>Tariq raised £26.70 on a 15 mile sponsored walk. How much was he sponsored for each mile?</p>																		